TECHNICAL BOOK REVIEW INDEX

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ANTHONY A. MARTIN, *Editor*

Volume 26 **December, 1960** **No. 10**

THE purpose of the Technical Book Review Index is primarily to identify reviews in current scientific, technical, and trade journals; secondarily, when feasible, to quote from these reviews. In the evaluation of scientific and technical books, reviews constitute the best existing source of information. The service of the Technical Book Review Index is thus in the field of evaluation, rather than in competition with existing publications which announce new and forthcoming books, list books by subjects, or supply bibliographic information. Each quotation immediately follows the name of the journal from which it is taken. Obviously, these brief extracts, detached from the context, must not be accepted as conclusive. Except for the correction of obvious errors, the bibliographic information is as given in the reviews. It is, therefore, in many cases incomplete and in some cases probably inaccurate.

Abbott, William.

Machine drawing and design. Ed.7. 281p. 1960. Blackie, Glasgow, 21s.

Mechanical world, Nov. 1960, p.486. ⅜ col.

"Encompasses present-day requirements as regards drawing methods and presentation, giving attention to the perspective views now so much used as well as the modern orthographic styles . . . Additional to the numerous examples in the text are some 40 pages of examples in machine drawing and design to supplement the main text and to illustrate the kind of question likely to be encountered in examinations. Altogether the book provides a good intermediate course."

Advances in fluorine chemistry. v.1; edited by M. Stacy and others. 203p. 1960. Academic Press, New York, $8.

Chemical & engineering news, Oct. 24, 1960, p.82. 1 col.

"Each of the articles is well written by an expert in the field and well documented with many references to recent literature. They may be easily understood by all chemists but are written primarily for those who wish to become thoroughly informed about the specific topics . . . This book is a good beginning. Chemists who work with fluorine and its compounds will be helped greatly if the series is continued and with the high standards set by the first volume." *George H. Cady.*

Aigrain, Pierre R., and others.

Electronic processes in solids. 67p. 1960. Wiley, New York, $4.

Electronic industries, Oct. 1960, p.52. ¼ col.

"Intended for those with a background in calculus and wave mechanics. Band theory and transport theory in covalent semiconductors are presented on a level intermediate between that of the detailed original work and that of elementary treatment. The major assumptions are discussed in some detail but the mathematical developments have only been indicated. The rather new thermodiamic [sic] approach to transport theory and a unique treatment of the 'hot electron' problems will interests [sic] physicists, as well as those who are mostly concerned with practical applications."

Albert, Adrien.

Selective toxicity. Ed.2, revised and enlarged. 233p. 1960. Wiley, New York, $5.50.

Pharmaceutical journal, Oct. 8, 1960, p.349. ⅝ col.

"Deserves the attention of a wide range of readers, for it offers one of the best available introductions to the subject while also serving as a valuable source of reference. In this respect it could be recommended unreservedly to pharmacists who feel the need to revise and extend their knowledge in this field, and to students reading for degrees or diplomas in pharmacy . . . Research workers in comparative biochemistry will also welcome the book and find much of interest to them." *H. Williams.*

Allard, R. W.

Principles of plant breeding. 485p. 1960. Wiley, New York, $9.

American forests, Nov. 1960, p.5. 7 l.

"A heavy, laboriously written college text that is packed with data. Genetics, self-pollinating and cross-pollinating principles, disease resistance, polyploidy in plant breeding—this and much, much more is offered." *Monroe Bush.*

Allcott, Arnold.

Plastics to-day. 115p. 1960. Oxford, New York, $2.90.

British plastics, Oct. 1960, p.490. ¼ col.

"A comprehensive general survey of plastics for the general reader . . . Written designedly in such a manner that the reader with only the sketchiest knowledge of organic chemistry

can obtain very useful preliminary information on what plastics are, how they are made and what they are used for . . . Clearly written, eminently readable and free from ambiguities: but there are perhaps one or two items in the book on which slightly different views might be expressed . . . Should be of considerable value as an introduction for those wishing to obtain information on the plastics industry." *C. A. Redfarn.*

Allen, Shirley Walter, & **Sharpe,** G. W.
Introduction to American forestry. Ed.3. 466p. 1960. McGraw, New York, $7.95.

American forests, Nov. 1960, p.5. 8 l.

"This thorough revision of a popular textbook takes note of new laws and new techniques that apply to efficient American forestry. A new chapter, 'Beneficial Influences and Services from the Forest,' gives an up-to-date emphasis to the multiple role of the well managed forest." *Monroe Bush*

American Society of Photogrammetry.
Manual of photographic interpretation. 868p. 1960. The Society, 1515 Massachusetts Ave., N.W., Washington, D. C., $15.

American forests, Nov. 1960, p.5. ⅛ col.

"A well-edited, copiously illustrated reference work on the increasingly useful field of aerial photography. The book is testimony to the quality of professional standards that have been developed in this new discipline within scarcely more than three decades. Photogrammetry is employed in some fashion by virtually every major aspect of America's physical life, and this book reports on these uses." *Monroe Bush.*

Oil and gas journal, Nov. 7, 1960, p.166. ⅜ col.

"This excellent and comprehensive work . . . is a fine presentation on the techniques and uses of photographic interpretation . . . Will appeal to both tyros and experts alike. Many authors have contributed their professional skills to this book—which in effect is a symposium of extensive compilation covering all of the applied techniques . . . Illustrations are numerous and outstanding . . . Numerous and complete bibliographies are provided at the end of each chapter . . . All in all, this is a monumental accomplishment."

Austin, C. K.
Formwork to concrete. 283p. 1960. Cleaver-Hume, London, 30s.

Concrete and constructional engineering, Oct. 1960, p.380. ⅜ col.

"A very practical treatise on an essentially practical subject . . . Sufficient theory is given to make the construction of shuttering comprehensible to the students and practical men for whom the book is written . . . Contents include the design and construction of shuttering for simple foundations, columns, beam-and-slab floors, curved beams, flat slabs, straight and curved walls, chimneys, cooling towers, dormer roofs, arches and vaults, domes, stairs, balconies and the like, culverts, bridges, and some precast products."

Bartee, Thomas C.
Digital computer fundamentals. 342p. 1960. McGraw, New York, $6.50.

Design news, Oct. 24, 1960, p.89. ½ col.

"An excellent introduction to the digital computer . . . First, the function of the computer is described, along with its applications in business, industrial and scientific organizations. The steps necessary to preparing a problem for a computer are then covered. Typical electronic computer circuitry is explained, followed by an introduction to block diagram representation in the use of circuits and the use of Boolean algebra to describe the functioning of the circuits. Each major division of the digital computer is explained."

Bell, David Arthur.
Electrical noise; fundamentals and physical mechanism. 342p. 1960. Van Nostrand, Princeton, N. J., $10.

Electronic technology, Oct. 1960, p.400. ½ col.

"Most radio engineers encounter at times the limitations imposed by the internal noise of receiving systems, and the general nature of the noise and its main causes are widely appreciated. Dr. Bell's account of work in this field during the past few years is designed for the specialist who wishes to study the physical mechanisms in detail and to compare the various theories which have been advanced to explain the observed noise . . . On the whole, the layout, with few subdivisions and excessively long paragraphs, does not facilitate reading, or use . . . for reference purposes . . . There is also an occasional lack of clarity . . . These deficiencies are not of major importance . . . May be recommended to the specialist who requires a survey of the whole field in a single volume." *F. H.*

Journal of electronics and control, June 1960, p.463. ⅓ p.

"The number of authoritative texts on electrical noise is limited, and this contribution from an acknowledged authority is therefore all the more welcome. Physicists and electrical engineers will rejoice in the author's disclaimer to being a mathematician, and this is reflected in his approach to the subject . . . A very wide field is embraced, and ably dealt with. The author's style is lucid and unusually readable. Altogether this is a book with a future."

Bennion, Edward G.
Elementary mathematics of linear programming and game theory. 140p. 1960. Michigan State Univ. Press, East Lansing, Mich., $5.

Operations research, Sept.-Oct. 1960, p.746. ⅝ p.

"Objective . . . is to impart an understanding of the rationale underlying linear programming and game theory to people with little training in higher mathematics. Therefore, this book deals primarily with theory rather than applications and is intended for what the author calls the curious-mathematical-lowbrow class . . . The author has attempted to make this book self-contained for people who have not had calculus or matrix algebra. This is a noble objective but it is not actually attained . . . In spite of the above criticisms, this book is well-written and clear." *Anthony A. Mastor.*

Berl, Walter G., ed.
Physical methods in chemical analysis. Ed.2, revised. v.1. 686p. 1960. Academic Press, New York, $19.

Analytical chemistry, Nov. 1960, p.79 A. ⅝ col.

"Deals with those physical methods of analysis involving the interaction of radiation with matter . . . Consists of a series of chapters, each essentially a monograph in itself, written by specialists competent in their respective fields . . . Written to present the principles and practices of these physical methods as the newest tools for the practicing analyst. It has accomplished this aim admirably . . . This new edition is highly recommended not only to the analytical specialist who will profit by expanding the scope of his field but also to those whose work relies heavily on results of physical analytical measurements." *H. J. Stolten.*

Bharucha-Reid, A. T.
Elements of the theory of Markov processes and their applications. 468p. 1960. McGraw, New York, $11.50.

Science, Oct. 28, 1960, p.1244. 1 col.

"The staggering range of applications for Markov processes covers almost every subject from astronomy to zoology. Hence, the appearance of a book which brings together between its covers an introduction to most of these applications is indeed welcome. Although the choice of topics . . . is fascinating, it is probably a necessary corollary that not all topics are treated equally well . . . Applications in astronomy and chemistry . . . are discussed only superficially and seem to have been transported unchanged from the original papers to the book . . . There are an overly large number of typographical errors . . . Although no single subject can be learned completely from it, the book provides an excellent introduction to a wide scope of applications." *George Weiss.*

Binsted, Raymond, & **Dewey,** J. D.
Soup manufacture; canning, dehydrating and quick-freezing. Ed.2, revised and enlarged. 169p. 1960. London Food Trade Press, Ltd., 7 Garrick St., London, W.C.2, 40s.

Food engineering, Oct. 1960, p.151. 9 l.

"New formulae and illustrations of latest equipment and machinery for the manufacture, canning, dehydration and quick-freezing of all types of soups are included in this volume. Book is geared to the needs of sales and management personnel as well as technologists."

Bluemle, Andrew, ed.
Saturday science. 334p. 1960. Dutton, New York, $5.94.

Science counselor, Sept. 1960, p.90. ⅛ col.

"The scientists of the Westinghouse Research Laboratories conducted a science honors course on Saturdays for outstanding high school students. This book is made up of fourteen chapters written by the scientist-teachers of this course . . . The result is a book that not only explains the fundamental principles and techniques of physics, but also presents an excellent picture of scientists as real people . . . Can be recommended to the student interested in science and definitely belongs in the school library." *J. P. M.*

Brauer, Georg, ed.
Handbuch der präparativen anorganischen Chemie. Ed.2. v.1. 884p. 1960. Enke, Stuttgart, Germany, DM 124.

CPE and atomic world, Oct. 1960, p.474. 2 col.

"The first edition of this book . . . [was] edited by Prof. R. Schwarz . . . Its various sections have been contributed by 14 specialists, each well known in his own field. The completed work will contain a description of the majority of inorganic preparations which are important from a purely scientific viewpoint or because of potential technical interest. An important qualification, however, is that compounds available commercially, or which can readily be prepared by familiar methods, are omitted. One is thus left with what may be described as the cream of the subject . . . There is . . . no doubt as to its value to the research worker and in certain industrial laboratories." *H. J. Emeléus.*

Bray, Thomas John.
Course of reinforced concrete design. Ed.3, revised. 290p. 1960. Chapman & H., London, 63s.

Engineering materials and design, Nov. 1960, p.708. ⅖ col.

"Completely rearranged, and much of it has been rewritten and slightly expanded. There are now fifty-one design charts, and they are placed near their explanatory text, which is an improvement. There are three important but brief chapters added on hollow-block floors, high yield-point steel and load-factor design . . . No important subject covered in the earlier editions seems to have been omitted, and the author's thorough revision of the book should make it useful to the experienced designer, without loss of the clarity of the earlier editions." *John S. Scott.*

Brehaut, D. H., and others.
An approach to natural science. 264p. 1960. Methuen, London, 8s. 6d.

Science counselor, Sept. 1960, p.90. ⅛ col.

"An introductory textbook in general science . . . Prepared for use in an English school, but it could just as well be used in an American secondary school. Five authors have collaborated in preparing its fifteen chapters, but the editing is so well done that it is difficult to recognize it as the work of a group . . . Teachers who are looking for a new approach to general science should examine this interesting book. We can also recommend it as a good book for the science teacher's reference shelf." *J. P. M.*

Carlin, Benson.
Ultrasonics. Ed.2. 309p. 1960. McGraw, New York, $11.50.

Control engineering, Nov. 1960, p.210. ½ col.

"Slanted toward practical engineering design and industrial applications, this . . . book . . . covers theory and methods of generating waves, outlines circuits and other considerations, and discusses mechanical and electrical

design of systems . . . Treats various phases, from the design consideration of ultrasonic crystals to the experimental measurement of ultrasonic waves in various media, including data on instruments and applications."

Electrical South, Oct. 1960, p.133. ⅔ col.

"Covers new developments in the testing of materials, cleaning, welding, soldering, medical, and other applications . . . Includes new advances in the design of generators, transducers, transducer tools and joinings, and on means of testing equipment . . . Explains changes in the form of matter brought about by ultrasonic agitation in the chemical, physical, and biological fields, and describes characteristics of ultrasonic waves important in practical applications."

Product engineering, Oct. 31, 1960, p.75. ⅙ col.

"Covers the complete field of ultrasonics—from the theoretical to the latest applications. New developments in materials-testing, cleaning, welding and soldering are included, as well as recent advances in the design of ultrasonic equipment. A significant chapter explains the chemical, physical and biological changes in matter, which are caused by ultrasonic waves. Other useful characteristics of ultrasonics are described."

Chandrasekhar, Subrahmanyan.

Plasma physics. 217p. 1960. Univ. of Chicago Press, Chicago, $1.75 unbound.

Physics today, Nov. 1960, p.46. ¼ col.

"Although this account of plasma physics presents the theory mainly along the lines developed by Chandrasekhar and Rosenbluth, it is nevertheless a valuable addition to the physicist's bookshelf . . . These notes lack a detailed examination of nonlinear effects and present little of the molecular theory due to Bohm and Pines. Nevertheless it is as good an introduction to recent theoretical research in plasmas as can be gotten at this time." *George Weiss.*

Christiansen, Gordon Secrist, & **Garrett,** P. H.

Structure and change. 600p. 1960. Freeman, San Francisco, $8.75.

Chemical products and chemical news, Oct. 1960, p.479. ⅔ col.

"Purpose . . . is to introduce the student to the scientific view of the physical world . . . Assumes the student to possess only the casual, common-sense information of a partially educated non-scientist . . . Discusses the language, problems, background, and principles of science, and uses any ideas that contribute to the development of its theme. From the mechanical view of the physical world, through the electrical view, the ideas are outlined and developed with ever increasing completeness and complexity, until the modern quantum-mechanical and relativistic view of the structure of matter is reached." *S. O.*

Science counselor, Sept. 1960, p.90. ¼ col.

"The authors . . . by organizing their presentation around the concept matter, have produced a most interesting textbook and, by their insistence on basic principles, have avoided the pitfall of oversimplification. The subject matter is well within the capacity of the college freshman . . . Well organized, basic concepts are stressed, and many fine illustrations contribute to the clarity of the text. In content, it is up-to-date, and the student who only reads it will find that he has acquired a sound appreciation for the present state of the physical sciences." *J. P. M.*

Clark, W. Mansfield.

Oxidation-reduction potentials of organic systems. 584p. 1960. Baillière, London, 108s.

Chemistry & industry, Oct. 15, 1960, p.1291. ½ col.

"Despite some rather irritating superfluities, and a considerable degree of verbosity, this book contains some interesting and very useful material to be taken up into a teaching course on the electrochemistry of oxidation-reduction potentials. Details are given so that even students left largely to themselves should be able to follow the necessary theoretical background of this branch of electrochemistry, and also to master various difficulties of practical techniques . . . Can be recommended for libraries of textbooks on physical chemistry, and of reference books on the thermodynamics of electrolytes." *A. R. Ubbelohde.*

Clauser, Francis H., ed.

Symposium of plasma dynamics. 369p. 1960. Addison-Wesley, Reading, Mass., $12.50.

ARS journal, Oct. 1960, p.986. ⅝ col.

"Offers a broad and advanced view of the field of plasma dynamics . . . Not for the beginner in this field, since it shows specialist describing and defending their work before other experts in the field. Nomenclature is varied and frequently unexplained, and the text often lacks detail which would be expected in informal blackboard-type discussions. This reviewer found it difficult reading at times, but when augmented by work and supplementary reading, it was often rewarding. The book does bring the experienced reader nearly up to the present (i.e., to mid 1958) and gives him a glimpse of other areas of this big subject . . . Should provide a stimulus for persons engaged in plasma research." *Robert A. Gross.*

Nuclear physics, Sept. 1960, p.715. ⅛ p.

"While the subject is one of growing interest to many types of scientists, the book should be of particular value to thermonuclear physicists, missile and space engineers, astrophysicists, and electronics engineers . . . Offers the broadest view yet presented of the whole field of plasma dynamics. The well-written text, the excellent editing, the beautiful drawings and remarkable photographs as well as the fascinating subject make the reading of the book a real pleasure." *H. Wilhelmsson.*

Colchester, Christopher D.

Air traffic control. 100p. 1960. Marconi Telegraph Co., Ltd., Chelmsford, England, 17s. 6d.

Journal of the Royal Aeronautical Society, Oct. 1960, p.642. ⅔ col.

"Collected papers of . . . a study . . . undertaken by Marconi Wireless Telegraph Co. Ltd. . . . Presents some of the views and findings of the members of this group on various aspects of this vast problem, for the consideration of those whose work lies in the field of Air Traffic Control . . . Tells no story . . . does not attempt to sell anything, and . . . offers no over-

all solution to the problem. After careful study of the views expressed, however, the reader is left with the feeling that there are plenty of solutions available if only someone would state the question." *B. E. J. Heard.*

Cotton, Harry.
Principles of illumination. 526p. 1960. Chapman & H., London, 75s. net.
Electrical journal, Oct. 7, 1960, p.955. ⅜ col.
"A much-needed and very welcome addition to the all-too-few texts on lighting and the author is to be congratulated on having produced a book covering a wide field in considerable detail. The treatment is very clear, as would be expected from an experienced teacher, and anyone with a good groundwork of elementary optics and electrical engineering should be able to follow it with perfect ease. Both the theoretical and practical sides of the subject are dealt with very thoroughly and the book is evidently the result of much careful work." *J. W. T. W.*

Crampton, Earle W., & **Lloyd,** L. E.
Fundamentals of nutrition. 494p. 1960. Freeman, San Francisco, $7.50.
Chemistry & industry, Oct. 15, 1960, p.1295. 1 col.
"Some . . . faults of the book are perhaps only irritating . . . The style . . . is stodgy, and varies from the clumsy . . . to the quite incomprehensible . . . There are, unfortunately, many more serious faults . . . The object of the authors is 'to introduce an integrated picture of the field of nutrition.' This is just what they have not achieved . . . I can conceive of no-one to whom I could recommend this book." *John Yudkin.*

Crandall, W. B. See **Tinklepaugh,** James Root, & **Crandall,** W. B., ed.

Crow, William Barnard.
Synopsis of biology. 1056p. 1960. Wright, J., Bristol, England, 90s.
Times science review, Winter 1960, p.18. 8 l.
"Designed primarily for exam-taking students—elementary data being therefore emphasized—the inclusion of an index with close on 10,000 entries should commend it to librarians as a first step in meeting difficulties encountered by readers who require, for whatever reason, to enter unfamiliar territory in biology."

Curie, D.
Luminescence cristalline. 209p. 1960. Dunod, Paris, 14.50 N.F.
Physics today, Oct. 1960, p.58, 60. ⅜ col.
"Gives a very extended view of its subject covering dipole and quadrupole radiation, emission, and absorption probabilities, the emission and absorption spectra in the configuration coordinate curve model, the experimental determination and application of configuration coordinate curves, optical transitions in a crystalline photoconductor, electron traps, their thermal and optical activation, extinction phenomena, energy transfer, sensibilization, and many other subjects. The author skillfully blends experimental and theoretical information into a unified whole . . . Can be very much recommended to those interested in crystalline luminescence." *L. Marton.*

Darr, Jack.
Servicing unique electronic apparatus. 126p. 1960. Sams, Indianapolis, $2.50 unbound.
Electronic industries, Nov. 1960, p.74. ⅛ col.
"Explains basic operating theory and practical servicing techniques for troubleshooting and repair of a variety of unique electronic devices used primarily for industrial applications. Equipment covered includes ultrasonic cleaners, diathermy, automatic flow control, photo-flash, garage-door openers, movie-projector sound systems, and others. Value of the text material is considerably augmented by schematics, drawings and photographs . . . Emphasizes that there's more to the service field than just radio and television."

Day, Allan R., & **Joullié,** M. M.
Organic chemistry. 864p. 1960. Van Nostrand, Princeton, N. J., $9.50.
Chemistry & industry, Oct. 15, 1960, p.1295. ⅛ col.
"Well produced and clearly written, although a wealth of fundamental information is packed into 864 pages. It appears to the reviewer that it would be highly suitable for students taking a General Degree in a British university, with chemistry as a main subject. For the Honours student the wide range of subject matter is unfortunately not treated in sufficient detail, although it would be excellent reading matter for him in his first or second year of Honours . . . Another very useful textbook of organic chemistry." *G. A. Swan.*
Journal of the Royal Institute of Chemistry, Oct. 1960, p.362. 1¼ col.
"Well produced and fully indexed and, although there is room for improvement, the authors are to be congratulated on a major contribution. The reviewer has no hesitation in recommending the book to Honours and Grad. R.I.C. students, and also to research workers and other practising chemists. Whether it is widely accepted here, in the face of much competition, will depend largely on the price, which, although by no means excessive, is still rather high by British standards." *R. E. Parker.*

De Ong, Elmer Ralph.
Chemical and natural control of pests. 244p. 1960. Reinhold, New York, $8.75.
Chemistry & industry, Oct. 22, 1960, p.1329. 1 col.
"That the forces of nature must be supplemented by chemicals to achieve adequate protection against insects, weeds and plant diseases is not questioned, but that in 200 pages one could hope 'to assist the manufacturer, research worker, instructor and farmer in evaluating the most effective methods of pest control' is a claim difficult to substantiate. Too much has been attempted in too little space so that the information provided is incomplete and may indeed be misleading." *F. P. Coyne.*

Dimond, A. E. See **Horsfall,** J. G., & **Dimond,** A. E., ed.

Edelmann, Abraham, ed.
Radioactivity for pharmaceutical and allied research laboratories. 171p. 1960. Academic Press, New York, $6.

Chemistry & industry, Oct. 15, 1960, p.1291. 1 col.

"A collection of papers presented originally at a symposium held in Uniontown, Pennsylvania, U.S.A., in 1959 . . . Concerned primarily with the use of radioactive tracer and isotope dilution methods in the development and testing of new drugs and other technical chemicals . . . Worth reading by all chemists who have to deal with complex analytical problems and with the proving of new products, and who are not already using radiotracer methods freely . . . Can be immensely valuable to the practical chemist in meeting his day-to-day problems of product control and process development." *W. P. Grove.*

Egli, Paul H., ed.

Thermoelectricity. 407p. 1960. Wiley, New York, $10.

Design news, Oct. 10, 1960, p.129. ⅝ col.

"In all the material sciences, thermoelectricity offers a great challenge and a great opportunity to create new materials with specified properties. It is the purpose of this book to provide guidance for the scientists and engineers who are working in this expanding field. Most of the chapters were presented at the Conference on Thermoelectricity sponsored by the Naval Research Laboratory. Many have since been expanded in scope."

Electronic industries, Oct. 1960, p.54. ⅛ col.

"Divided into four sections. Section 1 presents an introduction and broad survey of the fundamental concepts of thermoelectrity. The second section examines the physics of the properties which determine thermoelectric performance. The last section emphasizes high temperature problems and explores the relative merits of static and transient methods of measuring thermoconductivity . . . Conclusion, written by Dr. Eglie [sic], synthesizes the ideas presented in the main body of the book and offers valuable guides for the selection of materials at this early stage of development."

Elliott, John F., & **Gleiser**, M.

Thermochemistry for steelmaking v.1. 296p. 1960. Addison-Wesley, Reading, Mass., $10.50.

Engineer, Oct. 14, 1960, p.631. ½ col.

"In the present volume the authors have concentrated on presenting information on the pertinent chemical properties and some physical properties of important elements and compounds . . . Arranged in four sections, dealing in turn with the physical properties of selected elements, thermochemical properties of selected elements, standard heats and free energies of formation of selected compounds, and vapour pressures of selected elements and compounds. No data are included on the enthalpy increments, entropy increments and heat capacities of pertinent compounds."

Ewing, Galen W.

Instrumental methods of chemical analysis. Ed.2. 454p. 1960. McGraw, New York, $8.90.

Analyst, Oct. 1960, p.775. ⅝ p.

"The opportunity has been taken in this second edition to include material on magnetic-resonance spectroscopy, gas chromatography and electrophoresis, and there is a special chapter on electronic circuitry for analytical instruments. Each chapter appears to follow the same general pattern, *i.e.*, the important analytical methods are first described, with sufficient theory for their general understanding, after which the most useful features of the requisite apparatus are detailed. The limitations of the various tests are discussed, and each chapter includes bibliographical notes . . . Although this book is primarily for the student, it ought to find a place on the shelves of the analytical chemist's library." *J. Haslam.*

Journal of chemical education, Nov. 1960, p.A750, A752. 1¼ col.

"Retains most of the desirable features of the earlier work . . . and the author continues to present the theory and application of selected modern analytical techniques at a level that can be comprehended by advanced undergraduate and first-year graduate students. In order to bring his treatment up to date Professor Ewing has rearranged some of the material, deleted certain discussions and expanded others, and added a few new topics . . . A number of other changes have improved the value of the text . . . In short, the 'new Ewing' is just that—an improved new edition that can be heartily recommended." *H. W. Safford.*

Fieser, Louis F., & **Fieser**, M.

Style guide for chemists. 115p. 1960. Reinhold, New York, $2.95.

Journal of the American Oil Chemists' Society, Oct. 1960, p.26. ⅝ col.

"The book is such a pleasure to read that I have only one regret; it isn't comprehensive enough. Although the authors have taken up the common pitfalls of writing, their success may be measured by more than 115 pages of useful suggestions. It is therefore possible and certainly desirable that this book will be expanded in future revisions. Although this style guide is written by chemists for chemists, it may provide a guide to better writing for anyone who takes time to read it." *F. A. Kummerow.*

Frey, Paul R.

Essentials of college chemistry. 520p. 1960. Prentice-Hall, Englewood Cliffs, N. J., $6.95.

Journal of chemical education, Oct. 1960, p.551. ⅝ col.

"Deserves consideration for courses for students who have not had high school chemistry or for courses which are somewhat shorter than those designed for science majors. It should be realized that although the approach is more gradual, the treatment is reasonably rigorous, and that this is not simply a 'watered-down' version [of the author's previous books]. The author is to be commended for his selection of material for courses of these types, instead of leaving instructor and students to flounder in texts which contain far more than they can possibly hope to cover in the allotted class time." *Albertine Krohn.*

Fuhrer, Rudolf.

Landesfernwahl. 2v. 546p. 1959. Oldenbourg, Munich, Germany, DM 68.

Post Office Electrical Engineers' journal, Oct. 1960, p.166, 168. 1¾ col.

"Both volumes include an excellent bibliography, most of the publications, understand-

ably perhaps, being from German sources. The two volumes form a very excellent treatment of immediate past and current German telephone techniques, Volume I being a general introduction, and a logical approach, to Volume II, which volume then develops the adopted solutions with meticulous reasoning and a wealth of detail. Most of the problems, of course, are not unique to the German Bundespost conditions; they apply to all telephone networks, and these books will undoubtedly create considerable interest outside Germany." *S. W.*

Gale, David.

Theory of linear economic models. 330p. 1960. McGraw, New York, $9.50.

Journal of the Franklin Institute, Oct. 1960, p.322. 1⅝ col.

"Professor Gale has written a book in mathematics which is of primary concern to economists, but which few students of economics will be able to read without considerable effort. Mathematicians from other areas will not find it easy either. This situation arises because the modern mathematics which is basic to economic models is just now finding its way into the undergraduate curriculum . . . While these remarks may imply a criticism of this volume from one point of view, this reviewer prefers to take the position that 'growing pains' cannot be avoided in the development of good quantitatively oriented economists, and that the author's efforts toward this goal are admirable." *W. Jay Merrill, jr.*

Gill, H. R.

Concrete formwork designer's handbook. 153p. 1960. Concrete, London, 15s.

Structural engineer, Oct. 1960, p.316. ⅛ col.

"Gives more than fifty nomographs, tables and other charts for the rapid design of the components of the formwork, or shuttering, for vertical or inclined walls, straight or curved walls, beam-and-slab construction, and dams, and continuously-moving forms. The various factors affecting the lateral pressure of freshly-placed concrete against the forms are evaluated and the stresses permissible in timber, plywood, and steel under various conditions are given. The design aids are supported by the basic formulae from which they are derived, but the derivations of the formulae are given in an appendix so that the practical parts of the book are free of theoretical analysis."

Godwin, Felix.

Exploration of the solar system. 200p. 1960. Chapman & H., London, 35s.

Contemporary physics, Aug. 1960, p.499. 8 l.

"This comprehensive survey of possible developments in astronautics over the next 150 years describes in detail designs for building rocket-ships, plans for provisioning them, and the tactics and strategy of colonizing the less inhospitable planets. Many of the problems that will face the space-traveller are discussed, and the author gives some possible solutions, a number of which are his own ideas. Mr. Godwin was only nineteen years old when he wrote the book; he is well versed in the authorities on the subject, and writes with a competence that might be envied by authors several times his age . . . Fascinating and easily readable." *B. J. Hoole.*

Grunwald, Ernest, & **Johnsen,** R. H.

Atoms, molecules, and chemical change. 252p. 1960. Prentice-Hall, Englewood Cliffs, N. J., $6.

STWP review, Oct. 1960, p.25. ⅜ col.

"A clear, concise discussion of some important fundamentals of chemistry. The theme, the structure of matter and the chemical consequences of structure, is developed in a partly historical and partly logical manner . . . Intended primarily for nonscience students at university level. The originality of concept and approach are wholly commendable. In addition, it will be found absorbing reading by anyone who has observed or read about the chemical phenomena of our day and wants further understanding of the underlying principles." *I. H. Jenks.*

Guggenheim, E. A.

Elements of the kinetic theory of gases. 92p. 1960. Pergamon, New York, $3. (International encyclopaedia of physical chemistry and chemical physics, v.1.)

Chemistry & industry, Oct. 15, 1960, p.1291. ⅜ col.

"It is difficult to judge the quality of the whole encyclopaedia from a single volume which forms only part of a topic. What can be said about this present volume is that it leaves the topic very incomplete. The portions of the subject it does cover are treated with the mathematical elegance and excellence one expects from the author, but the treatment suffers from a certain lack of experimental realism which is a common difficulty in books on Kinetic Theory." *A. R. Ubbelohde.*

Guild, John.

Diffraction gratings as measuring scales. 211p. 1960. Oxford, New York, $5.60.

Journal of the Optical Society of America, Oct. 1960, p.1030. ⅞ col.

"A compendium of the very extensive experience of the National Physical Laboratories in this field. The descriptions are very detailed and the presentation is aimed at a wide audience with limited experience in optics and electronics. The treatment may therefore appear somewhat too elementary and pedantic to readers of the J. Opt. Soc. Am. . . Despite . . . minor drawbacks relative to the more sophisticated applications, the basic features and characteristics of Moiré fringe techniques are well presented." *K. G. Kessler.*

Gunther, F. A., & **Jeppson,** L. R.

Modern insecticides and world food production. 284p. 1960. Chapman & H., London, 50s.

Chemistry & industry, Oct. 1, 1960, p.1235. 1⅛ col.

"The early chapters . . . are devoted to entomological topics and problems arising from the use of insecticides. Insect behaviour, the relationships between insects and their host plants and the factors influencing the development and intensities of infestations are admirably discussed, and the problems of chemical residues in foodstuffs, of the accumulation of spray materials in soils and the possible adverse

effects upon plants and soil organisms, and of insect resistance are well presented . . . Achieves its objective of providing the general reader with an insight into the need for insecticides and into the problems arising from their use." *J. T. Martin.*

Halbwachs, F.

Théorie relativiste des fluides à spin. 294p. 1960. Gauthier-Villars, Paris, 60 N.F.

Nuclear physics, Sept. 1960, p.716. ⅔ p.

"If . . . we forget about the unfortunate metaphysical background of this book, we find that it contains a well-written and extensive account of the theory of rotating fluids, in which full regard is paid to the relativity requirements; although the peculiar difficulties of this theory have long been elucidated, and excellent presentations of its main aspects . . . are available, the detailed treatment given here will doubtless be most helpful to anyone wishing to acquaint himself with these little-known aspects of relativistic hydrodynamics." *L. R.*

Hall, Newman A., & **Ibele,** W. E.

Engineering thermodynamics. 643p. 1960. Prentice-Hall, Englewood Cliffs, N. J., $10.50.

Design news, Oct. 24, 1960, p.89. ⅔ col.

"Endeavors to set forth the foundations and techniques of thermodynamic analysis from the viewpoint of the engineer . . . Deals with such diverse and complex groups of thermal phenomena as energy transfer by heat, phase equilibrium and the general behavior of gases in non-ideal solutions . . . Increased and continued emphasis is placed on the important Second Law of Thermodynamics which dictates the direction of energy transformations, and which concerns all practicing engineers in the field today . . . Develops this significant Second Law in a form permitting its continued use for the calculation of irreversible processes."

Product engineering, Nov. 7, 1960, p.95. ⅓ col.

"This college text has a unique approach with a completely new pattern of emphasis, and includes results of years of research by the authors into the behavior of fluids. It has a rather independent point of view, especially wherein the thermodynamics of solids and magnetic fields becomes as complete as the thermodynamics of fluid substances. At the beginning of each chapter is a lucid explanation of the background for each topic."

Hallert, Bertil.

Photogrammetry; basic principles and general survey. 340p. 1960. McGraw, New York, $11.

Photogrammetric engineering, Sept. 1960, p.579. ½ col.

"The most comprehensive survey of the important instruments and techniques of Photogrammetry available in one volume. Its comprehensive coverage makes it very useful as a handbook or guide to further information as well as supplying the basic descriptions and formulae of photogrammetric techniques . . . The individual student who has only elementary mathematics will have no difficulty with the book's clear diagrams and illustrations of the important methods and applications of photogrammetry . . . Recommended as a most useful tool for all those who are working in photogrammetry as a career." *O. S. Reading.*

Hanrahan, James Stephen, & **Bushnell,** D.

Space biology; the human factors in space flight. 263p. 1960. Basic Bks., New York, $6.

Aerospace engineering, Nov. 1960, p.103. ⅛ col.

"An historical survey of research accomplishments. In the *Introduction,* the authors review the evolution of man's desire for interplanetary flight and the development of his sciences and technology to the point where this is possible . . . The major portion . . . is concerned with the design and operation of manned space vehicles, the effects of *g*-forces and weightlessness, and the hazards of radiation in space."

Missiles and rockets, Oct. 17, 1960, p.48. 10 l.

"A very thorough discussion of the biological problems confronting the space traveler, including a history of the experiments contributing to present knowledge. Drs. Hanrahan and Bushnell are scholar-historians at Holloman Air Force Base in New Mexico, one of the principal centers of research in this field, but the work is written in non-technical, narrative form."

Hansen, Werner.

Heizöl-Handbuch für Industriefeuerungen. 369p. 1959. Springer, Berlin, DM 31.50.

Engineer, Sept. 30, 1960, p.547. ¼ col.

"A compendium like the present work, which assembles in accessible form a wide range of facts of industrial oil-firing practice, will be welcomed by many, in view of the increasing importance of fuel oil in many technological processes. After describing the production of oil fuels from petroleum and from coal, their physical and chemical properties and classification, and the combustion process as such, the book deals with a number of specific topics such as burners, installation . . . heat transmission, losses and recuperation, contingent effects . . . and economic aspects. The second part . . . is concerned with particular industrial applications, of which may be mentioned boilers of all kinds."

Hansford, R. F., ed.

Radio aids to civil aviation. 623p. 1960. Heywood & Co., London, 126s.

British communications & electronics, Nov. 1960, p.852. 1⅔ col.

"The appearance of the first single, comprehensive reference-source on the applications of radio in civil aviation will be widely welcomed in the aviation and radio industries and among those professionally concerned with both . . . The editor's chief difficulty must have been to select a level of treatment that would retain the confidence of the qualified radio engineer but would not expect a too intimate technical knowledge on the part of the operations and control specialists to whom the book is equally addressed. He has managed this task very well." *E. H. Bruce-Clayton.*

Helstrom, Carl Wilhelm.

Statistical theory of signal detection. 364p. 1960. Pergamon, New York, $9.50. (International series of monographs on electronics and instrumentation, v.9.)

Consulting engineer, Nov. 1960, p.228. ⅔ col.

"A mathematical approach to detection, in the presence of random noise, of electrical signals such as those used in radar and communications . . . Teaches the philosophy used in the design of optimum detection systems and analyzes the factors on which signal detectability basically depends . . . Written for graduate students and for workers in mathematics, electrical engineering, or physics . . . A text rather than a reference book."

Heslop, Richard B., & **Robinson,** P. L.

Inorganic chemistry; a guide to advanced study. 555p. 1960. Van Nostrand, Princeton, N. J., $9.

New scientist, Sept. 22, 1960, p.807. 1 col.

"In writing a textbook of this kind it is inevitable that a selection of material must be made. Some subjects, particularly the physical, are much condensed, and although the authors have done well in breaking down some of the artificial barriers between inorganic and physical chemistry, opinions will vary as to the desirability of including a chapter on chemical kinetics of nine pages. The selection of material for the purely inorganic chapters has been made on a fundamental basis . . . A worthwhile book for the undergraduate at a modest price." *R. D. Peacock.*

Hill, R. See **Progress** in solid mechanics.

Hoffman, W. C., ed.

Statistical methods in radio wave propagation. 334p. 1960. Pergamon, New York, $14.

Journal of the Institution of Electrical Engineers, June 1960, p.375. ¼ col.

"A symposium [was] held in Los Angeles in June 1958 to encourage discussion of both the radio problems and the statistical methods by experts in the two fields. Some 23 papers were presented and have been printed in this valuable . . . volume. They cover a number of aspects of statistical theory, relevant investigations in tropospheric and ionospheric propagation, and aerial design, and there are also two papers on instrumentation for processing propagation data . . . Should be found useful not only by those engaged in propagation research — particularly on scatter transmission problems — but also by students of statistics."

Horsfall, J. G., & **Dimond,** A. E., ed.

Plant pathology; an advanced treatise. 3v. v.3: The diseased population, epidemics and control. 675p. 1960. Academic Press, New York, $22.

Chemistry & industry, Oct. 22, 1960, p.1330. ⅔ col.

"The first two volumes having covered the host and pathogen respectively, this final volume unites the two in a consideration of the diseased population of plants, epidemics and control methods and measures . . . Inoculum potential and dispersal are the concern of five contributions, followed by sections on the analysis and forecasting of epidemics, and on quarantines. The final five articles describe control measures . . . Maintains the principles and qualities of the previous two, and the complete work can now take its acknowledged place in the literature of plant pathology." *J. C. Felton.*

Ingard, Karl Uno, & **Krausharr,** W. L.

Introduction to mechanics, matter, and waves. 672p. 1960. Addison-Wesley, Reading, Mass., $9.75.

Machine design, Oct. 13, 1960, p.320. ⅔ col.

"Particular stress is placed on the basic concepts of mass, momentum, energy, angular momentum, and their conservation laws. Collision experiments and conservation laws serve as the starting point and central theme in development of material. Then, from the study of momentum transfer during collisions, force is investigated as a dynamical concept. Planetary motion and formulation of the universal law of gravitation from Kepler's laws are thoroughly covered . . . Behavior of wave pulses, wavespeed, and energy content are explained through a combination of experiments and application of conservation of momentum."

Johnson, Harold V.

Metal spinning techniques and projects. 130p. 1960. Bruce Pub., Milwaukee, Wis., $3.50.

American machinist/metalworking manufacturing, Oct. 17, 1960, p.228. ⅔ col.

"Intended for school and home workshop use, this volume briefly describes the techniques of spinning metal, but it is doubtful whether a student could attain any proficiency in the art without considerable guidance from an experienced instructor. The instructions are scanty and the tools are inadequately described. It would appear that the author is well acquainted with his subject but lacks experience in putting the information into writing. The style is jerky, almost telegraphic, and there is too much reliance on illustrations which carry mere labels, rather than give information." *H. E. L.*

Jordan, Otto.

Kunststoffklebstoffe und ihre Anwendung. 84p. Hanser, Munich, Germany, DM 7.80. (Kunststoff-Verarbeitung, pt.7.)

British plastics, Oct. 1960, p.490. ⅔ col.

"The author has attempted to compile experiences and considerations in bonding plastics materials and to familiarize the plastics worker with the latest results achieved in this field. With this in mind he does not restrict himself to new materials but also deals with mechanical considerations and preparations . . . Makes important reading for every plastics processor and contains numerous ideas for the solution of a great variety of bonding problems."

Kaufmann, Dale W., ed.

Sodium chloride; the production and properties of salt and brine. 744p. 1960. Reinhold, New York, $20.

Food engineering, Oct. 1960, p.151. ⅓ col.

"About all that's possible to know about

salt and brines is included in this new monograph of sodium chloride. All modern data on the sources, production, properties, and uses of the product are covered in 26 chapters compiled through the efforts of 19 specialists. Broad as well as specific data is [sic] included and current developments in production and uses will be helpful to technologists concerned with nutrition and salt properties."

Kerchner, Russell M., & **Corcoran,** G. F.
Alternating-current circuits. Ed.4. 602p. 1960. Wiley, New York, $8.75.

Electrical design news, Oct. 1960, p.88. ⅓ col.

"Contains the same basic material as the previous editions with the addition of material designed to make the book more suitable to some of the changing needs of electrical-electronic technology. These additions include an introductory chapter on network concepts, discussion of topology, duality, network variables and the pole-zero method of circuit analysis. All of these subjects are designed to prepare the reader for the more advanced courses in network theory which are being added increasingly to undergraduate curricula in electrical engineering."

Electronic industries, Nov. 1960, p.51. ¼ col.

"Numerous additions and modifications have been made thorughout [sic] where experience has shown the need for improvement. An introductory chapter on network concepts has been added to give the student a deeper insight into the general methods of network analysis. Network variables, topology, and duality are considered."

Kilner, E., & **Samuel,** D. M.
Applied organic chemistry. 500p. 1960. Macdonald & Co., London, 50s. net.

Manufacturing chemist, Oct. 1960, p.453. 2⅛ col.

"Contains 24 chapters dealing in the main with manufacture and use of heavy and fine organic chemicals. As a supplement to existing textbooks on organic chemistry, intended to emphasise the industrial aspect, it perhaps falls rather short of its final object, but nevertheless a good deal of the subject matter will be of considerable value to the student of modern chemistry—particularly those undergoing industrial training as part of their curriculum . . . It is a pleasure to read a book of this type on applied organic chemistry and Messrs. Kilner and Samuel are to be congratulated on their pioneer effort." *J. H. Skellon.*

Kindler, Herbert S.
Organizing the technical conference. 139p. 1960. Reinhold, New York, $6.

Chemistry in Canada, Oct. 1960, p.107. ¼ col.

"Brief, helpful and to the point, it should be required reading for everyone who has anything to do with conference organizing . . . Includes specimen check lists of duties and activities, as well as suggested schedules to follow in planning . . . Also well documented with references to further reading and source material in the field of conference and meeting planning. The moment you find yourself on a meeting committee, read this book!"

Electronic industries, Oct. 1960, p.54. ⅛ col.

"More than a book about holding technical conferences; it is a working manual that clearly charts the duties and activities of the organizing committee . . . Answers completely the questions of when to initiate, and how to plan, organize and conduct effective technical conferences, whether large or small. All facets of programming, promoting, documenting, administering and evaluating professional meetings of all kinds . . . are explained . . . Also analyzes and interprets key factors that contribute to a successful conference."

Kirschbaum, Emil.
Destiller- und Rektifiziertechnik. Ed.3. 415p. 1960. Springer, Berlin, DM 48.

Journal of the American Association of Oil Chemists' Society, Nov. 1960, p.21. ⅛ col.

"Covers the theory of distillation more broadly than the first one (1939). Kirschbaum discusses industrial techniques in more detail. The author shortened the appendix, gives references only to phase equilibria, and omits discussions of molecular distillations . . . Amply illustrated with graphs and drawings of equipment . . . Kirschbaum covers this field quite thoroughly and expresses himself clearly. Chemical engineers and chemists in the oil and fat field will be interested in this volume, particularly in connection with the purification of fatty acids and their derivatives and problems of deodorization." *Hans Wolff.*

Laeis, M. E.
Der Spritzguss thermoplastischer Massen. Ed.2, revised. 301p. 1959. Hanser, Munich, Germany, DM 29.

British plastics, Sept. 1960, p.438. ⅜ col.

"The author, who is an acknowledged expert in his field, has compiled a wealth of information gathered in the light of the latest developments. Starting from the definition of the term 'injection moulding' he first gives a survey of the historical development. This is followed by a description of the construction and mode of operation of injection moulding machines including a comprehensive, illustrated representation of the machines (with performance data) built in Germany and other countries since 1945. In the following chapters he deals with injection moulds and compounds."

Lawson, D. F.
Technique of photomicrography. 256p. 1960. Newnes, London, 55s.

Journal of the Oil and Colour Chemists' Association, Oct. 1960, p.764. ¾ p.

"An up-to-date book on optical microscopy, particularly photomicrography, profusely illustrated with explanatory diagrams, with photographs of modern instruments, and with micrographs . . . A concise theoretical and practical compendium, mainly for the beginner, covering objectives and eyepieces, illuminators, condensers, and optical systems for special methods of illumination, namely for polarisation, infra-red, ultraviolet, phase contrast and newer interference and reflection techniques . . . Printing and presentation are excellent." *S. H. Bell.*

Levinger, J. S.
Nuclear photo-disintegration. 144p. 1960. Oxford, New York, $2.

Science, Oct. 7, 1960, p.951. ⅝ col.

"In this monograph J. S. Levinger summarizes all the available theoretical ideas about the nuclear photoeffect and relates them to the experimental results . . . Clearly a must for the specialist in photonuclear reactions. Those working in other branches of nuclear physics will find it a helpful summary, and the atomic physicist will enjoy seeing the connection between the atomic and nuclear problems." *Evans Hayward.*

Lythall, R. T.

A.c. motor control and distribution gear for use on medium voltage systems. 95p. 1960. Belmos Co., Ltd., Bellshill, Lanarkshire, England, 15s.

Electrical review, Oct. 28, 1960, p.736. ⅛ col.

"Limited in scope to equipment for controlling motors operating on a.c. supplies up to 600 V. This is not a severe limitation, however, as the majority of the motors in general industrial installations come within this category and it does permit the subject to be dealt with in some detail." *T. R. W.*

Iron & coal trades review, Oct. 14, 1960, p.842. ⅜ col.

"Does not claim to be a full treatise on the subject, but limits its field to equipment for the control of motors up to 600 volts on a.c. systems and treats these under the following headings:—Standard methods of starting a.c. motors; some simple control circuits and sequence interlocking schemes; protective gear; air-break industrial equipment; the problem of short-circuits related to busbars and apparatus on industrial group motor control boards; air-break flameproof equipment . . . Intended primarily as a study book, it will also serve well as a reference, although in this connection the provision of an index . . . would have been helpful."

Macdonald, A. M. G.

Elementary titrimetric analysis. 133p. 1960. Butterworth & Co., London, 12s. 6d.

Chemistry & industry, Oct. 22, 1960, p.1330. ⅜ col.

"The purpose . . . is to serve as a teaching manual for students in schools and junior technical colleges . . . Covers only one phase of analysis — titrimetric procedures — but aims at ensuring that the student not only learns the necessary manipulations but understands the underlying theory . . . The author deserves praise for having compressed so extensive a range of elementary practical instruction in this field in so small a compass." *A. J. Amos.*

Journal of the Oil and Colour Chemists' Association, Oct. 1960, p.765. ⅜ p.

"Aims at providing a '. . . judicious intermingling of the theory and practice of titrimetric analysis' for schools and junior technical colleges. The main sections . . . deal with acid-base and redox titrations. The theoretical sections are easy to follow, containing many worked examples of the calculations required, including the construction of pH and redox potential curves . . . For those who aim at a career in any field of chemistry, the practice of analysis can instil the care and attention to detail which are essential to any worthwhile scientific investigation. These good habits must start in the schools, and this book will give an excellent introduction to the subject of titrimetric analysis." *R. E. Coulson.*

Journal of the Royal Institute of Chemistry, Oct. 1960, p.363. ⅔ col.

"The appearance of this book is to be welcomed, for, without abandoning what is of value in the traditional methods, it introduces a great deal of material which is up to date and comprehensible at the appropriate stage of practice . . . The chief criticism . . . is . . . the rather summary initial descriptions for the carrying out of titrations—the procedure for the rough titration is missing—and for the setting out of results . . . However, the book is to be recommended." *H. J. Sheppard.*

McDougal, Wynne Luther, and others.

Fundamentals of electricity. Ed.4, revised by Kennard C. Graham. 342p. 1960. American Technical Soc., Chicago, $4.75.

Electronic engineering, Nov. 1960, p.718. 9 l.

"This new edition has been fully revised and expanded to keep pace with developments being made in the field. Each electrical principle is well defined and its applications fully explained. Supplementing the text are many illustrations, including many diagrams and schematics, all of which conform to ASA Graphical Standards."

McIntyre, Robert L.

A-c motor-control fundamentals. 248p. 1960. McGraw, New York, $5.95.

Electrical design news, Oct. 1960, p.88. ⅛ col.

"An elementary discussion of motor controls and their application in industry . . . Shows how to develop circuits step by step to perform any desired function. Very little mathematics is employed in the discussion; instead, the author relies almost completely on word descriptions to describe how the circuits function. For engineers who have not had occasion to become familiar with motor control circuits, this book can provide such a background in short order."

Markow, M. A.

Hyperonen und Mesonen; translated from the Russian. 328p. 1960. VEB Deutscher Verlag der Wissenschaften, Berlin, DM 42.80.

Nuclear physics, Sept. 1960, p.717. ⅛ p.

"Professor Markow's masterly lectures of 1957 on the new discoveries of fundamental constituents of matter and the theoretical problems raised by their interpretation are now made available . . . The translation has been revised and (to a certain extent) brought up to date by the author, who, however, has wisely retained the primitive disposition, presenting a clear picture of the gradual development of our ideas in this novel domain. An advantage of the survey of the field here given is that Russian work is more fully described in it than in most other reviews; and not the least attractive feature is the exposition of the author's own original views on the unsolved theoretical problems." *L. R.*

Maxwell, Robert Louis.

Kinematics and dynamics of machin-

ery. 477p. 1960. Prentice-Hall, Englewood Cliffs, N. J., $9.75.

Product engineering, Oct. 31, 1960, p.75. ⅔ col.

"An undergraduate textbook that treats the subject matter with a minimum of mathematics . . . Mathematical expressions are used only where they promote better understanding of the theory or application of the basic principles. The treatment emphasizes acceleration analysis and its relation to forces; and the material on these topics is much broader than usually found in books at this level. Broad coverage of kinematic concepts with just enough detail is given for a comprehensive understanding of dynamics of machinery."

Mechanical press handbook. 256p. 1960. Metalworking Magazine, 221 Columbus Ave., Boston, $5.

Machine and tool blue book, Oct. 1960, p.202. ⅜ p.

"[This book] is basic enough to be understood by the near neophyte and comprehensive enough to be of use in almost every stamping plant. Written in clear, easy-to-read language, the book's 15 chapters cover the range of mechanical press design and use from basic components to highly sophisticated, complete operating units . . . Besides information on types of equipment, the authors also discuss economics, giving a clear picture of the role these high-precision machines can play in modern industry. The book has a singleness of purpose that makes it both coherent and readable, even though its scope is extremely wide."

Moslo, Ernest P.

Runnerless molding. 162p. 1960. Reinhold, New York, $4.95.

British plastics, Oct. 1960, p.490. ⅓ col.

"A most readable book on a subject of great interest and importance to the injection moulding industry. Mr. Moslo is already known as an expert in the field of moulding by virtue of his many articles in the American technical literature. The opportunity to read him at greater length, and to have the essence of the available information on this technique of moulding so neatly presented, make this a most worthwhile publication . . . Will appeal to a wide range of people in the industry." *W. A. Maslen.*

Modern plastics, Oct. 1960, p.180. ⅓ col.

"The first book devoted exclusively to this important subject in the field of injection molding covers machine and material requirements for automatic molding, nozzle design, molding thin-wall containers, multi-cavity runnerless molding for large parts, valve gating, sequential impact molding, and the subjects relating to the production of molded parts without the need for external degating operations. An excellent summary of practical, up-to-date know-how on the subject." *G. R. S.*

Neetson, Pieter A.

Junction transistors in pulse circuits. 139p. 1960. Macmillan, New York, $5.50.

Electrical design news, Oct. 1960, p.88. ⅓ col.

"A practical engineering discussion on the design and analysis of basic pulse circuits containing transistors. Sections include: Pulse Generators; Pulse Shapers; Frequency Dividers; Logic Circuits; and Voltage-Level Switches. A considerable number of references are given, although most of these are in European journals because the author is associated with N. V. Philips' Gloeilampenfabrieken of Holland. Fortunately, many ot [sic] these can be secured in this country."

Osborne, W. C. See **Woods,** Geoffrey.

Parkes, Alan Sterling, & **Smith,** A., ed.

Recent research in freezing and drying. 320p. 1960. Blackwell Scientific Publications, Oxford, England, 63s.

Manufacturing chemist, Sept. 1960, p.407. ⅜ col.

"A full account of the second international symposium on Freezing and Drying organised in 1958 by the Institute of Biology. Much of the symposium dealt with the effects of freezing and it was noticeable that glycerol and other protective substances received great attention. In the field of freeze-drying one speaker after another recorded striking advances, especially in the preservation of potential function or viability of biological material. This is a most remarkable achievement, currently expressed in the preservation of bull spermatozoa."

Pearson, H. M.

Railway works construction. 304p. 1960. Transatlantic Arts, Hollywood-by-the-Sea, Fla., $8.75.

Civil engineering and public works review, Oct. 1960, p.1317, 1319. ⅘ col.

"Written primarily for the benefit of works supervisors, although it is claimed to be likely to be of assistance to chargehands and foremen and to provide a reference for engineers at all levels. It is, however, in the opinion of the reviewer, unlikely to fulfil adequately all of these claims. The technical standard . . . and the nature of its contents are such as not to be of great use to the qualified engineer, except perhaps to newcomers to the railways, to whom tit-bits of established railway engineering procedures and practices will be invaluable . . . Essentially a book for the ambitious craftsman with an enquiring mind." *D. L. B.*

Penn, W. S.

Synthetic rubber technology. Maclaren & Sons, London, 50s.

Rubber journal and international plastics, Oct. 8, 1960, p.548. 1 col.

"A number of books have previously been published on synthetic rubbers but these have been based primarily on the chemistry of their manufacture and have given a very incomplete treatment of their compounding and processing. Both students and practising technologists have long felt a need for a comprehensive book on these aspects of the subject, and Mr W. S. Penn is to be congratulated on tackling the task . . . In spite of . . . minor criticisms I feel that this volume will be found most useful to a great number of practising technologists as well as forming a text book for senior students of the subject." *R. C. M.*

Progress in solid mechanics. v.1; edited by I. N. Sneddon and R. Hill. 448p. 1960.

Interscience Publishers, New York, $15.50.

Journal of the Institute of Metals, Oct. 1960, *metallurgical abstracts*, p.190. ¾ col.

"First of a projected series of volumes directed towards providing review articles of the highest standard on various topics chosen from a rapidly advancing branch of applied mathematics, namely the mechanics of solids . . . There is no doubt that this is a most valuable book for the specialist interested in the behaviour of solids, particularly metals . . . There are many [others] who are interested in one or perhaps two of the separate topics discussed . . . and for them to have available an up-to-date, authoritative, mathematical description of their subject is invaluable." *J. M. Alexander.*

Pryor, E. J.

Mineral processing. Ed.2, revised. 814p. 1960. Mining Publications, Ltd., Salisbury House, London, E.C.2, 90s.

Canadian mining and metallurgical bulletin, Oct. 1960, p.838. ⅘ col.

"Mathematical presentation has . . . been strengthened, but the emphasis in this book on the value of some knowledge of physical chemistry in successful testing and plant control has led to further enlargement of the chapters concerned with the surfactant forces that operate in ore pulps. However, while developing and explaining the basic theory, the practical worker has not been forgotten and this new edition carries forward the record of growth in scientific processing of minerals in a form which will be of value not only to students but also the practising engineer and the ambitious shift worker."

Iron & coal trades review, Sept. 30, 1960, p.742. ⅔ col.

"The change of title from its original form [An Introduction to Mineral Dressing] is a small part of the revision and enlargement of scope which give this second edition something of a new look . . . The author has been at pains to meet the main criticisms of his first edition. The quality, presentation, and usefulness of the illustrations have benefited by radical revision and a closer correlation with the text and by the inclusion of more source material from other countries. Mathematical presentation has also been strengthened."

Quinet, J.

Theorie et pratique des circuits de l'électronique et des amplificateurs. Ed.4. v.1: Théorie et applications du calcul des imaginaires à l'étude des circuits. 272p. 1960. Dunod, Paris, 22 N.F.

Electronic engineering, Nov. 1960, p.718. ¼ col.

"Not only does the author feel at home in this subject, but he also has the rare ability to make the reader feel equally at ease . . . Divided into three parts. Part I establishes the mathematical foundations of imaginary calculus. Part II applies this knowledge to electrical circuits. Part III deals with radio and electronic circuits. This fourth edition . . . has been entirely revised and considerably expanded. Worthy of mention is the appearance of several new theorems on circuits." *A. V. J. Martin.*

Reid, A. T. Bharucha-. See **Bharucha-Reid,** A. T.

Reid, Charles E.

Principles of chemical thermodynamics. 306p. 1960. Reinhold, New York, $7.80.

Chemistry & industry, Oct. 22, 1960, p.1329. ½ col.

"In such a comparatively short text it would be easy to make a list of things omitted or treated only rather superficially. In particular, the thermodynamics of the solid state and of phase transformations is given only scant attention. But taken as a whole the book fulfils the needs of an introductory course in thermodynamics for American graduate students, and for British honours students in chemistry, with economy and efficiency." *A. R. Ubbelohde.*

Consulting engineer, Nov. 1960, p.226. ¼ col.

"The book is distinctive in that entropy is treated postulationally, with no attempt to make it depend on heat engines. A chapter on statistical thermodynamics is included, and molecular concepts are used freely whenever they serve the purpose of clarity. The terminology is not original but has been chosen so as to be readily understandable to those accustomed to any of the more common systems."

Reitz, John R., & **Milford,** F. J.

Foundations of electromagnetic theory. 387p. 1960. Addison-Wesley, Reading, Mass., $8.75.

Machine design, Oct. 13, 1960, p.322. ⅛ col.

"Basic experimental laws of electricity and magnetism are covered first. Then, a rigorous exposition of the fundamental theory is presented. A substantial number of example problems are analyzed. Elementary atomic concepts are utilized in development of macroscopic theory. Physical approach is used in treatment of polarization and magnetization. Relation of microscopic and macroscopic concepts of electric and magnetic fields inside matter, and an introduction to plasma physics are also included."

Philosophical magazine, Sept. 1960, p.977. ⅝ p. including another review.

"A text written for a course on electricity and magnetism for physicists, advertised as 'at advanced undergraduate level', though it does not quite cover all that might be expected in Cambridge of a final year student . . . There are . . . a few gaps, with no mention for example of noise, valves, the impulse response of a two-terminal system, or the formulation of magnetostatic energy in the presence of permanent magnets . . . On the whole the style is extremely clear, and the book can be warmly recommended as a good text for third year students." *V. H. O.*

Rodenhuis, E.

Hi-fi amplifier circuits. 116p. 1960. Cleaver-Hume, London, 15s.

Electronic engineering, Nov. 1960, p.719. ¼ col.

"A sequel to the author's previous book entitled *Valves for A.F. Amplifiers* . . . Describes a number of pre-amplifier circuits which give high quality results and can be built at a reasonable price by anyone who has acquired

the minimum skills . . . Contains much practical information and tips necessary for the best results, and is intended for those who are interested in building and experimenting with high quality amplifiers; for the manufacturer of Hi-Fi equipment on a modest scale; for sound engineers and service engineers; in short for all whose business or pleasure it is to make use of these exciting new techniques."

Roman, Paul.

Theory of elementary particles. 575p. 1960. Interscience Publishers, New York, $12.

Philosophical magazines, Sept. 1960, p.976. ¼ p.

"The main part . . . consists of a very careful and very detailed discussion of those groups which are used for classifying the elementary particles and for examining the selection rules that govern their interactions . . . The mathematical apparatus which is set up is perhaps somewhat more elaborate than is necessary for the job it does, and in places the notation is too generalized and too cumbersome. Nevertheless this must be a valuable book for anyone who wishes to know what are the mathematical foundations of the symmetry principles of elementary particle physics." *J. H.*

Science, Nov. 11, 1960, p.1391. 1 col.

"An attempt to provide . . . students with an introduction to the main theoretical principles which are used in elementary particle physics, with particular emphasis on the symmetry properties of the interactions of particles. Regrettably . . . [the book] is only partly successful in fulfilling this aim . . . It is in the theory of strong interactions that present-day elementary particle theory is faced with its greatest problems; hence it is here that a textbook is hardest to write . . . It will perhaps be impossible to write a really adequate text on the theory of elementary particles until more of the major problems of that theory have been solved." *G. Feinberg.*

Rosen, M. J., & **Goldsmith,** H. A.

Systematic analysis of surface-active agents. 422p. 1960. Interscience Publishers, New York, $13.50.

Journal of applied polymer science, July-Aug. 1960, p.126. ⅔ col.

"The authors have attempted to classify all the existing literature on the analysis of surface-active agents into sections such as Detection, Isolation and Estimation; Qualitative Analysis; Quantitative Analysis; and Separation. This they have done quite well, and the text provides a convenient catalog of existing literature. A reviewer must find a weak point, and in my opinion, there is a lack of sufficient emphasis on instrumental methods of analysis, especially in the area of infrared absorption." *Sidney Siggia.*

Sänger, Eugen.

Uber das Richtproblem der Photonenstrahlenantriebe und Waffenstrahlen. 145p. 1959. Oldenbourg, Munich, Germany, DM 46.

Interavia, Oct. 1960, p.1301. ¼ col.

"Penetrating to boundaries of modern physics, the author aims at finding a way of utilizing photon beams. If these could be guided in a given direction, they could not only drive space vehicles, but could also find more 'down-to-earth' applications, such as nuclear energy techniques, high-temperature chemistry or influencing the weather . . . While the author is optimistic concerning the use of photon beams in space travel, he considers that the sharp focussing of these beams to one point in space . . . is hardly a feasible proposition." *W. Z.*

Say, Maurice G., & others, ed.

Analogue and digital computers. 308p. 1960. Philosophical Library, New York, $15.

Electronic industries, Oct. 1960, p.52. ⅛ col.

"Written by a panel of specialists . . . [and] aims at presenting the basic material on the design and application of both analog and digital computing systems . . . Intended primarily as a first source of information for newcomers to the computing field, but also provides a useful background for those experts in other subjects whose duties bring them into contact with computing systems."

Schaaf, William L.

Basic concepts of elementary mathematics. 386p. 1960. Wiley, New York, $5.50.

Science counselor, Sept. 1960, p.91. ⅛ col.

"The author's purpose . . . is to supply some of the mathematical background needed by teachers of elementary arithmetic. In view of the changes that are taking place in secondary mathematics and future changes that will certainly take place in elementary arithmetic, this book can be recommended not only as a textbook, but also as a reference book for those already teaching. The author stresses basic principles of many of the concepts of arithmetic, logic, geometry, and algebra . . . Interestingly presented, and, while its material is not too difficult, it does demand serious reading and study. It is in no sense a refresher or drill-book in arithmetic." *J. P. M.*

Schenkel, Gerhard.

Schneckenpressen für Kunststoffe. 420p. Hanser, Munich, Germany, DM 48.

British plastics, Sept. 1960, p.438. ⅛ col.

"Deals with screw-type presses for plastics on a wide basis and in a lucid way, considering its theoretical as well as its practical aspects. After a short historical survey . . . [the author] first deals with their field of application and the various types including their function and individual usefulness. Then follows a detailed investigation of the theoretical bases of the single screw-type presses together with a tentative theory of the multi-screw-type presses. The conclusions drawn from the theoretical knowledge for the design and operation of the machines are treated with particular thoroughness."

Schneer, Cecil J.

Search for order. 384p. 1960. Harper, New York, $6.

Physics today, Nov. 1960, p.54, 56. ⅔ col.

"The pages abound with scientific statements which are inexact, which are wrong, and which are meaningless. Often somewhat gaudy language obscures the intended meaning; and yet Dr. Schneer has given us a stimulating, over-

all look at physical science . . . Worth reading even if it infuriates the reader. T'is a pity; a little judicious pruning and careful revision could have made it so very much better." *I. Fankuchen.*

Science, Nov. 11, 1960, p.1392. 2⅛ col.

"A supplementary reading in an elementary course, or as a text for more advanced students with a sound background in science, philosophy, and history, the book is a valuable contribution to the increasing body of literature that attempts to bridge the gap between . . . the scientific and humanistic cultures of the modern world." *Konrad B. Krauskopf.*

Science counselor, Sept. 1960, p.90. ¼ col.

"A study of the development and history of principle [sic] ideas in physical science, which can well serve as the basic text for a course in the history of science. Such a course would enable the college student who has had good science courses in high school to obtain a realistic and accurate appreciation of the development and nature of science. It would also help the science major in developing a better evaluation of the place and work of the scientist. In addition to being a textbook, it is interestingly written, and it can be recommended to all who are interested in science." *J. P. M.*

Sky and telescope, Nov. 1960, p.295. 1⅛ col.

"Certainly this is not to be considered a 'popular' book in the usual sense, but few really good works are popular. For the serious student of science, this volume should be required reading. For the serious student who wishes to find out what is happening to his comfortable early 20th-century world, this book contains many of the answers . . . A beautiful blend of science, philosophy, and humanism has been achieved in this book. As a reference volume for a lively series of lectures to beginning students in liberal arts colleges. Dr. Schneer's . . . [book] would persuade many young people to embark on careers of science." *Roy K. Marshall.*

Schulz, Georg.

Eine Einführung in ihre Chemie und Technologie. 536p. 1959. Hanser, Munich, Germany, DM 49.

British plastics, Oct. 1960, p.491. ⅝ col.

"Dr. Georg Schulz has managed to cover the subject in a clear and easily understandable form. After a brief survey of the structure of plastics the various raw materials are dealt with. Then follows a detailed description of the most important types of polymer formation . . . and their derivatives. The widest space has been devoted to the various plastics materials, in which production methods, chemical and physical properties of the substances and historical development are described . . . A reference book which can give reliable information to manufacturers, processors, dealers and students."

Shklovsky, I. S.

Cosmic radio waves; translated from the Russian by Richard B. Rodman and C. M. Varsavsky. 444p. 1960. Harvard Univ. Press, Cambridge, Mass., $12.50.

Journal of the Franklin Institute, Oct. 1960, p.320. 3¼ col.

"Outlines the progress in the field up to the 1958 Paris Symposium on Radio Astronomy. In addition the author has drawn attention to a few selected papers published since that time. In the appendix, these papers are briefly summarized and each one is keyed to the text of the book dealing with the same topic. This has made the book quite up to date . . . Very useful to the active research workers in the field of radio-astronomy, because it focuses attention upon the major problems in urgent need of further study. Also it should be read by those who are interested in probing the mysteries of our universe." *V. R. Potnis.*

Simonis, Friedrich Wilhelm.

Stufenlos verstellbare mechanische Getriebe. Ed.2, enlarged. 190p. 1959. Springer, Berlin, DM 29.40.

Engineer, Oct. 14, 1960, p.631. ¼ col.

"Since the present book made its first appearance in 1949, the subject has grown in volume to such an extent that it has become necessary to confine the new edition to mechanical transmissions. The principal types, which are covered in detail, include friction drives using cones, cylinders, rotating rings, and spherical transmission elements, others incorporate rotating balls or rollers. A further main section deals with variable-speed belt and chain drives."

Smith, A. See **Parkes,** Alan Sterling, & **Smith,** A., ed.

Sneddon, I. N. See **Progress** in solid mechanics.

Stacy, M. See **Advances** in fluorine chemistry.

Stumpff, K.

Himmelsmechanik. v.1. 508p. 1959. Deutscher Verlag der Wissenschaften, Berlin, DM 56.80.

Proceedings of the Physical Society, Oct. 1, 1960, p.590. ½ p.

"Constitutes the first volume of a more extended work, devoted to a thorough outline of the problem of two bodies, and of methods for determination of planetary or cometary orbits based upon it. As such it encompasses fewer topics than the earlier and well-known treatises by Moulton or Smart; but it expounds them in more detail, and in a leisurely discursive style which should make the book particularly attractive to undergraduates. It can certainly hold its place side by side with Moulton's text . . . and is likely to become popular with those users who are interested in the theory of the two-body problem mainly as a basis for applications." *Zdenek Kopal.*

Symon, Keith Randolph.

Mechanics. Ed.2. 557p. 1960. Addison-Wesley, Reading, Mass., $10.50.

Machine design, Oct. 27, 1960, p.211, 213. ¼ col.

"Development of mechanics theory proceeds directly from Newton's laws of motion. More advanced methods using Lagrange's equations and tensor algebra are then introduced. Only a knowledge of differential and integral calculus is presupposed . . . Contains three new chapters and several additional sections to earlier chapters. Lagrange's equations include section on Lagrangian treatment of the vibrating

string, Hamilton's equations, and Liouville's theorem. Algebra of tensors, the inertia tensor, and the stress tensor are developed and discussed in the new chapters."

Syski, Ryszard.

Introduction to congestion theory in telephone systems. 742p. 1960. Oliver, Edinburgh, 105s.

New scientist, Oct. 6, 1960, p.942. 1⅛ col.

"Gives a thorough survey of the theoretical aspects of telephone traffic and trunking, the treatment being generally mathematical. A large number of recent works on the subject are included, the treatment of each following that of the original work . . . Contains little original work and must be considered fundamentally as a book of reference. The author has collected together most of the recent work on this subject, much of which would not otherwise be readily accessible. This comprehensive book can be recommended as a useful addition to published works on probability theory and its application to telephone systems, and as such will appeal to all interested in this subject." *A. T. Harmston.*

Talley, David.

Basic carrier telephony. 170p. 1960. John F. Rider, New York, $5.75.

Electronics world, Nov. 1960, p.114. ⅛ col.

"A fundamental, but technically rigorous, text, this volume deals with the transmission of multiple telephone and signalling intelligence over a single radio circuit, cable, or wire line. The growth of the telephone industry, and the need for using carrier telephony, is also discussed. First establishing telephone definitions and notations, the author delves into circuitry, controls, and switching."

Teach, William C., & **Kiessling,** G. C.

Polystyrene. 176p. 1960. Reinhold, New York, $5.

Machine design, Oct. 13, 1960, p.323, 325. ⅛ col.

"An introduction to the properties, applications, manufacture, and chemistry of polystyrene is presented. Major emphasis is on applications of polystyrene materials by injection molding, extrusion, vacuum forming, and as a foam. Recent information on uses of polystyrene in appliances, electronics, building, packaging, transportation, and toys and novelties is included."

Product engineering, Nov. 7, 1960, p.95. ⅛ col.

"The approach is semi-technical, and the text is aimed at engineers, designers and students. Physical and chemical properties are explained, including a simplified discussion of polymer chemistry. Stress is on uses of polystyrene, but well known and new fabrication processes are also discussed."

Termier, Henri, & **Termier,** G.

Erosion et sedimentation. 412p. 1960. Masson, Paris, 69 N.F.

Soil science, Oct. 1960, p.266. ⅜ col.

"An introduction to general geology and paleography. The material is presented in relatively elementary style and in readily readable form. The illustrations are exceptionally well chosen and add greatly to the presentation . . . A list of some 300 references, arranged alphabetically within the subject-matter divisions, a well-developed index, and a detailed table of contents are appended . . . A highly interesting and important contribution to the subject."

Terras, John A.

Practical use of radio aids for pilots. 67p. 1960. Pitman, London, 12s. 6d.

Journal of the Royal Aeronautical Society, Oct. 1960, p.642. ⅜ col.

"Explains simply, and in not too technical language, how a pilot may use various radio navigational aids available in the United Kingdom. Perhaps, in parts, this book oversimplifies the issues involved, not so much from the explanation point of view but from the practical application . . . Covers many of the radio navigational aids in use today, from simple V.D.F. procedures to the more complicated V.O.R. technique . . . An invaluable aid when starting out in the complex aviation world, or as a means of refreshing the memory of a more experienced pilot." *E. R. G. Parker.*

Tinklepaugh, James Root, & **Crandall,** W. B., ed.

Cermets. 239p. 1960. Reinhold, New York, $9.50.

Missiles and rockets, Oct. 17, 1960, p.48. ⅛ col.

"The editors have followed the major areas of emphasis in cermets in the United States with the idea that the detailed information pertaining to titanium carbide and aluminum carbide might be applied to other cermets. No effort has been made to include the European effort in this field. The physicochemical aspects of cermets are well covered. Through this the reader may become acquainted with the relationships between ceramics and metals which govern the selection of materials and the properties obtained. Surface energy as related to cermet theory is traced in considerable detail."

Tower, Merrill E.

Flight facts for private pilots. 216p. 1960. Aero Publishers, Inc., 2162 Sunset Blvd., Los Angeles, $5.

Design news, Oct. 24, 1960, p.90. ¼ col.

"Interesting, educational reading for any aviation enthusiast and . . . an excellent review for all pilots . . . An easy-to-understand coverage of all the fundamentals of flying that a pilot must comprehend before he can obtain his private pilot's certificate. More than 250 photographs and drawings aid in the explanation of subjects such as theory of flight, airplane control, takeoff, cruising, landing, structures, power plants, flight preparation, weather and how to use it, how to navigate, radio navigation, cross-country flying, instruments and altitude instrument flying."

Turner, C. J. See **Woods,** Geoffrey.

United States—Air Force.

Handbook of geophysics. Revised edition. 1960. Macmillan, New York, $15.

Consulting engineer, Nov. 1960, p.224. ⅛ col.

"Written for the Air Force by some 60 civilian scientists, making use of the latest data available from satellite and rocket exploration, polar expeditions, and extensive meteorological observations . . . Deals at length with the atmosphere and weather; to a lesser

extent with electro-magnetic phenomena; acoustics and visibility; the sun, meteors, and cosmic radiation; and geology of the earth's surface . . . Organized as a military manual (though fortunately it is more readable than most), and relies extensively on charts, graphs, and tables."

Van Valkenburg, M. E.
Introduction to modern network synthesis. 490p. 1960. Wiley, New York, $11.75.

Electrical journal, Oct. 21, 1960, p.1109. ¾ col.

"An undergraduate text, being designed for those persons who probably would not again have formal instruction in the subject. For its purpose, it is a good book; not one to have rave notices, but one from which the student can learn the subject. The title makes use of the word 'modern.' There is however very little modern in it. None of the topological methods developed *inter alia* by the Japanese are mentioned; the up-to-date use of Clifford Algebra is omitted . . . The treatment is quite rigorous without being over-pedantic." *G. S. B.*

Electrical review, Oct. 28, 1960, p.736. ⅜ col.

"Covers positive real functions, elementary synthesis for LC, RC, and RLC networks, approximation, two terminal-pair synthesis and the properties of network functions describing such networks, and synthesis from image parameters. Worked examples are provided, notes are given for further reading, numerous problems for solution by the reader are set and a selected bibliography is given . . . Illustrations are profuse and admirable. Of recent years many excellent books have been published on network synthesis and it may truly be said that this one is a worthy member of the most select of the group." *A. E.*

Proceedings of the IRE, Oct. 1960, p.1794. 1 col.

"A welcome addition to the literature of network synthesis . . . Intended to serve as a textbook for a senior undergraduate or a first-year graduate course, and the selection of topics covered . . . has been governed by what the author feels a student should know about synthesis if he has had only a single course in this area. The author's judgment is excellent . . . The presentation is concise and clear, and the book is self-contained. These facts, combined with the numerous problems and references for more advanced and detailed studies at the end of each chapter, make this book exceptionally well-suited to serve the purpose for which it is intended." *Thomas R. Williams.*

Weaver, Elbert C., & Foster, L. S.
Chemistry for our times. Ed.3. 666p. 1960. McGraw, New York, $5.72.

Journal of chemical education, Oct. 1960, p.550. ¾ col.

"Embodies few changes from the original pattern. The changes that are made are either minor and inconsequential . . . or they are changes that could be important were sufficient space devoted to them . . . As did its predecessor, this book has much to commend it. Nevertheless, it is quite disturbing to see the trend in high school chemistry books away from good, solid theory, and toward applications and technology. This is not the only text that has been 'revised' by modernizing the photographs, and by including all the latest investions, to the neglect of reorganizing the theoretical approach." *Fred B. Eiseman, jr.*

Wilson, Robert R., & Littauer, R.
Accelerators. 187p. 1960. Doubleday, Garden City, N. Y., $1.10 net. (Science study series.)

Science, Oct. 7, 1960, p.950. 1⅜ col. including another review.

"Begins with a discussion of why physicists need high-energy accelerators, and it proceeds to give a historical account of their development, always clarifying the physical principles employed . . . Discusses the Cockroft-Walton machine, the Van de Graaff accelerator, the other linear accelerators, and the many circular machines. The limitations of the various accelerators are indicated along with the techniques which overcome some of the limitations . . . Well-written and should prove understandable to anyone with a command of only elementary physics." *Howard Laster.*

Woods, Geoffrey.
Woods practical guide to fan engineering. Ed.2, revised. 290p. 1960. Woods of Colchester, Ltd., Colchester, England, 17s. 6d. net.

Power & works engineering, Oct. 1960, p.820. ¼ col.

"All the original sections have been revised and brought up to date . . . Concisely presents the basic principles governing the selection and operation of fans; it also contains practical information on the design of duct systems and fan applications. New sections added are on drying, air heating, and isolation of vibration; these are dealt with from the point of view of the engineer responsible for the supply, conditioning and control of the air used in process work . . . All the essential information is there and whilst authoritative is not intended to be exhaustive."

Young, Jay A.
Elements of general chemistry. 455p. 1960. Prentice-Hall, Englewood Cliffs, N. J., $6.95.

Journal of chemical education, Nov. 1960, p.A760, A762. 1 col.

"For the elementary one semester course in introductory chemistry that presumes no previous training in chemistry and only a minimum of mathematical background, instructors may find here a new text that warrants consideration . . . Unique features . . . include several instructive figures which supplement the discussion which is usually written in a simple, easily read style . . . The author seeks to show the reasonableness in chemistry, and he seems to achieve his goal in general." *W. H. Slabaugh.*

STWP review, Oct. 1960, p.29. ⅝ col.

"An excellent, clear text which is 'a practical introduction to the purposes, aims, and common sense of chemistry' . . . Reflects careful thought in planning and presentation. Designed for a one-semester course, it presents a logical sequence of ideas. Problems, analogies, and the conversational tone of the book provide a good structure for an introductory text. The final chapter, Atomic Nucleus, is up to date but it is rather short." *Allan Lytel.*

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